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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/329,487 06/10/99 KRISS

M 29284/35302

EXAMINER

TM01/0612

TREVOR B JOIKE
MARSHALL O'TOOLE GERSTEIN MURRAY & BORUN
6300 SEARS TOWER
233 SOUTH WACKER DRIVE
CHICAGO IL 60606-6402

NORMAN, M

ART UNIT

PAPER NUMBER

2163

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Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/329,487

Applicant(s)

KRISS ET AL.

Examiner

Marc E. Norman

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 June 1999.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-49 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 9-11, 13-16, and 22-49 is/are rejected.
- 7) ☒ Claim(s) 7, 8, 12, and 17-21 is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 18) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-6, 9-11, 13-16, and 22-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Geurts et al. and Pindyck et al.

As per claim 1, Examiner notes that Applicant is applying well-established statistical/econometric techniques to a particular business application. In particular, Applicant is performing an application of statistical/econometric analysis whereby 1) sample data is collected regarding two variables; 2) regression/correlation analysis is performed on the two variables; and 3) based on the regression results, data pertaining to the overall population of the first variable is used to estimate an overall value of the second variable. This is basic cross-sectional forecasting using a single-equation regression model as taught by Pindyck et al. (pages 180-190). While Pindyck et al. teaches the general analytical theory, it does not teach applying this technique to estimating competitor product sales. Examiner notes that market share (i.e., the ratio between sales of a company of interest and the sales of its competitors) is a widely used marketing research tool (See Geurts et al., page 1, first paragraph under TEXT). Geurts et al. teaches various methods for estimating market share (Time Series Models, Multiple Linear Regression Models, and Logit Models). While the techniques used by Geurts et al. for determining market

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share are different than that of the present invention, they nevertheless illustrate the degree to which market share analysis (and thus determination of competitors' sales) is a well-established art. Since the underlying cross-sectional forecasting technique of the Applicant's invention is well established, and since the Applicant is simply applying this technique toward a well established application (i.e., market share/competitor sales analysis), it would have been obvious to one of ordinary skill in the art at the time of the invention to apply the forecasting method of Pindyck et al. to the application of market share analysis such as illustrated by Geurts et al. for the purpose of analyzing customer purchases.

As per claim 2, official notice is taken that aggregating data according to categories is a common statistical technique that would have been obvious to apply to the estimating of competitor sales for similar reasoning as set forth regarding claim 1.

As per claims 3 and 4, official notice is taken that number of dollars spent and supplier shares are inherent in the notion of market share discussed above.

As per claim 5, Applicant is referred to page 13, lines 10-12 of the Specification, where Applicant states: "The unrotated principal components factor analysis is a well-known statistical analytical tool for analyzing input data."

As per claim 6, it is further noted that predictor variables are common features of regression analyses (see chapter 8 of Pindyck et al.; see also Uekawa et al.) that would have been obvious to apply to the estimating of competitor sales for similar reasoning as set forth regarding claim 1.

As per claim 9, official notice is taken that simply labeling the predictor variables $F_1 - F_i$ is not patently significant.

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As per claims 10 and 11, it is further noted that squaring predictor variables and multiplying predictor variables together are also common econometric techniques. See Pindyck et al., page 102, Model I regarding the polynomial model and page 103, Model VIII regarding the interaction model, respectively.

As per claim 14, it is again noted (see claim 3) that number of dollars spent is inherent in the notion of market share, and thus obvious based on the discussion of claim 1, above.

As per claim 15, it is again noted that squaring predictor variables is a common economic technique (see discussion of claim 10, above).

As per claim 16, it is further noted that criterion variables are common in the art of regression analysis (see Uekawa et al. for an example of regression analysis using predictor variables and criterion variables), and that the present invention is simply a particular application of this common technique (as discussed regarding claim 1).

As per claim 22, see discussion of claim 5, above.

As per claim 23, see discussion of claim 6, above.

As per claim 24, see discussion of claim 16, above regarding criterion variables.

As per claim 25, it is noted that performing a linear regression based on prediction and criterion variables is well known in the art of regression analysis (see for example Uekawa et al.) and would have been obvious to apply to the application of market share analysis for similar reasoning as described regarding claim 1.

As per claim 26, see discussion of claim 1 regarding estimating market share/purchases made by customers from other suppliers.

As per claim 27, see discussion of claim 5, above.

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As per claim 28, see discussion of claim 25, above.

As per claim 29, see discussion of claim 26, above.

As per claim 30, see discussion of claim 1 regarding each of steps a, b, and c.

As per claim 31, see discussion of claim 2 regarding aggregating data.

As per claim 32, see discussion of claim 5 regarding unrotated principal components factor analysis.

As per claim 33, see discussion of claim 6 regarding predictor variables.

As per claim 34, see discussion of claim 25 regarding performing linear regression.

As per claim 35, the claim is rejected based on the discussions above of claim 1 and of claim 25 regarding performing linear regression.

As per claims 36 & 37, see discussion above of claim 5, regarding unrotated principal components factor analysis.

As per claim 38, see discussion of claim 1 regarding estimating market share/purchases made by customers from other suppliers.

As per claims 39-43, the various limitations described have already been discussed with regard to claim 1 above.

As per claims 44 & 45, see discussion above of claim 5, regarding unrotated principal components factor analysis.

As per claim 46, see discussion of step b of claim 1, above.

As per claim 47, see discussion of step d of claim 1, above.

As per claims 48 and 49, these steps of determining a linear relationship and plugging data into the linear relationship are inherent aspects of linear regression analysis which are simply being applied to the specific case of market share analysis as discussed regarding claim 1.

Allowable Subject Matter

Claims 7, 8, 12, and 17-21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

As per claims 7 and 12, the prior art does not teach or render obvious predictor variables including a total number of trips in which in which dollars were spent in a category.

Claim 8 would be allowable since it depends from claim 7.

As per claim 17, the prior art does not teach or render obvious dividing the panelists into buckets and determining the criterion variables as the number of panelists in each bucket.

As per claim 18, the prior art does not teach or render obvious creating new predictor variables based upon scoring rules.

Claims 19-21 would be allowable since they depend from claim 18.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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Garg (U.S. Patent 6,044,357) teaches modeling of a competitive market with multiple brands.

Cunningham et al. teaches optimizing product sales based on historical Nielsen data.

Garg (U.S. Patent 6,009,407) teaches operations decision-making under multi-brand competition.

Felthaus et al. teaches a method of estimating product distribution.

Klapper et al. teaches forecasting market share using predicted values of competitive behavior.

Kemery et al. teaches an application of unrotated principal component analysis.

Brodie et al. teaches the use of econometric models to forecast market share.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc E. Norman whose telephone number is 703-305-2711. The examiner can normally be reached on Mon.-Fri., 8:00-5:30, with first Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tariq Hafiz can be reached on 703-305-9643. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-9051 for regular communications and 703-308-9051 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

MN
June 5, 2001



TARIQ R. HAFIZ
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100